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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/691,032

10/22/2003

Weizheng W. Wang

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THE DIRECTV GROUP INC

PATENT DOCKET ADMINISTRATION RE/R11/A109

P O BOX 956

EL SEGUNDO, CA 90245-0956

EXAMINER

FILE, ERIN M

ART UNIT

PAPER NUMBER

2611

MAIL DATE

DELIVERY MODE

07/12/2007

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/691,032

Applicant(s)

WANG ET AL.

Examiner

Erin M. File

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 24 April 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-24 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-4, 7-12, 15-17 and 19-22 is/are rejected.
- 7) ☒ Claim(s) 5, 6, 13, 14, 18, 23 and 24 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 22 October 2003 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date <u>6/4/2007</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Arguments

1. Applicant's arguments with respect to claims 1-24 have been considered but are moot in view of the new ground(s) of rejection.

Drawings

2. The drawings are objected to under 37 CFR 1.83(a) because they fail to show the function of clocks 204A-F in fig. 2 as described in the specification. Any structural detail that is essential for a proper understanding of the disclosed invention should be shown in the drawing. MPEP § 608.02(d). Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If

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the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 1-4, 7-12, 15-17, and 19-22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Vasanth et al. (U.S. Pub. No. 2006/0045191) in view of Goldstein et al. (U.S. Patent No. 6,002,713).

Claims 1, 9, 17, Vasanth discloses:

- demodulating and decoding an input signal having input data to produce a data output (see fig. 1, fig. 1, demodulator 148 receives an input signal which is then decoded by decoder 152, [0017]);
- generating equalizer parameters from the pseudo-training sequence ([0026])
- equalizing the input signal according to the equalizer parameters ([0017], see equalizer in fig. 1, 156)

Vasanth fails to disclose remodulating the data output to produce a pseudo-training sequence including an idealized input signal, however, Goldstein

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discloses remodulating the data output to produce a pseudo-training sequence including an idealized input signal (col. 7, lines 14-22). Because Goldstein discloses that his method of remodulating to determine equalizer coefficients has the advantage of increasing the channel equalization accuracy, (col. 2, lines 57-65), it would have been obvious to one skilled in the art at the time of invention to incorporate the remodulation to determine equalization training signals as disclosed by Goldstein into the invention of Vasanth.

Claims 2, 10, 19, 20, 21, 22, Goldstein further discloses the step of generating equalizer parameters from the remodulated data output comprises the steps of: buffering the input signal; and comparing the buffered input signal to the pseudo-training sequence to produce the equalizer parameters (col. 9, lines 5-16).

Claims 3, 11, Vasanth discloses recovering the carrier and timing of the input signal to produce a carrier and timing recovered signal ([0024]); demodulating the carrier and timing recovered signal to produce a demodulated signal; and decoding the demodulated signal to produce a received data signal (see fig. 1, fig. 1, demodulator 148 receives an input signal which is then decoded by decoder 152, [0017]).

Claims 4, 12, Goldstein further discloses re-encoding the received data signal to produce a re-encoded signal; and remodulating the encoded signal to produce the pseudo-training sequence (col. 7, lines 14-22).

Claims 7, 15, Goldstein further discloses the input signal is equalized before being demodulated and decoded (fig. 4, 140).

Claims 8, 16, Goldstein further discloses the step of generating equalizer

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parameters from the remodulated data output comprises the steps of: buffering the equalized input signal; and comparing the buffered equalized input signal to the remodulated data output to produce the equalizer parameters (col. 9, lines 5-16).

Claim Rejections - 35 USC § 112

5. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

6. Claims 19, 21 recite the limitation "an equalizer" in line 2. There is insufficient antecedent basis for this limitation in the claims.

Allowable Subject Matter

7. Claims 5, 6, 13, 14, 18, 23, and 24 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Conclusion

8. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

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A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Erin M. File whose telephone number is 5712726040. The examiner can normally be reached on M-F 1-9:30PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Payne can be reached on 5712723024. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Erin M. File/
Assistant Examiner, AU 2611
6/28/2007


DAVID C. PAYNE
SUPERVISORY PATENT EXAMINER